

Translation



PATENT COOPERATION TREATY

PCT/EP2003/003884



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 03SGL0103WOP		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/003884	International filing date (day/month/year) 15 April 2003 (15.04.2003)	Priority date (day/month/year) 15 April 2002 (15.04.2002)	
International Patent Classification (IPC) or national classification and IPC H01L 21/316, 21/311, 21/027, 21/3105			
Applicant SCHOTT AG			

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>7</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input checked="" type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input checked="" type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>	

Date of submission of the demand 06 September 2003 (06.09.2003)	Date of completion of this report 08 September 2004 (08.09.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

Form PCT/IPEA/409 (cover sheet) (July 1998)

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/003884

I. Basis of the report

1 - With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☒ the description:
pages _____ 1-36 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the claims:
pages _____ 1-53 _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the drawings:
pages _____ 1/10-10/10 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/003884

I. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 11-36,43-52

because:

☐ the said international application, or the said claims Nos. _____
relate to the following subject matter which does not require an international preliminary examination (*specify*):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. _____
are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. _____ are so inadequately supported
by the description that no meaningful opinion could be formed.

☒ no international search report has been established for said claims Nos. 11-36,43-52

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/003884

IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☒ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

See supplemental sheet

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☐ all parts.
- ☒ the parts relating to claims Nos. 1-10,41,42,53

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International Application No.

PCT/EP 03/03884

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: BOXES III and IV.3

BOX III

see international search report, partial search,
PCT/ISA/206, further indications

BOX IV.3

see international search report, partial search,
PCT/ISA/206, separate sheet

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/03884

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims		YES
	Claims	1-4, 10, 41, 42, 53	NO
Inventive step (IS)	Claims		YES
	Claims	6-9	NO
Industrial applicability (IA)	Claims	1-10, 41, 42, 53	YES
	Claims		NO

2. Citations and explanations

This report makes reference to the following documents:

- D1: US 2001/055864 A1 (SHI LEATHEN ET AL) 27 December 2001 (2001-12-27)
- D2: PATENT ABSTRACTS OF JAPAN Vol. 008, No. 014 (P-249), 21 January 1984 (1984-01-21) & JP 58 172679 A (FUJI SHASHIN FILM KK), 11 October 1983 (1983-10-11)
- D3: PATENT ABSTRACTS OF JAPAN Vol. 2000, No. 12, 3 January 2001 (2001-01-03) & JP 2000 241985 A (PIONEER ELECTRONIC CORP), 8 September 2000 (2000-09-08)
- D4: US-A-4 506 435 (PLISKIN WILLIAM A ET AL) 26 March 1985 (1985-03-26)
- D5: ANONYMOUS: 'Balanced Resistance Magnetoresistive Head Compensated against Thermal and Piezoresistive Effects. April 1975.' IBM TECHNICAL DISCLOSURE BULLETIN, Vol. 17, No. 11, 1 April 1975 (1975-04-01), pages 3478-3480, XP002264775, New York, US

1. The subject matter of claims 1, 2, 4, 10, 41, 42, 43 and 53 is not novel and the requirement of PCT Article 33(2) is therefore not met.

1.1 Document D1 is regarded as the closest prior art and

discloses:

a process for the structured coating of a substrate having at least one surface to be coated, the process comprising the following steps:

the production of a first, negatively structured coating on at the least one surface (claim 27, step (a));

the deposition of at least one second layer comprising a vaporised glass (claim 32) onto the surface provided with the first coating and the at least partial removal of the first coating (claim 27, step (c)).

Moreover, D2-D5, all of which belong to entirely different technical fields, also disclose each of the technical features of claim 1. This indicates that the scope of claim 1 is too general.

- 1.2 Claim 2: the step of producing a first, negatively structured coating on the at least one surface also includes in D1 the step of exposing zones of the at least one surface to be coated (figure 4).
- 1.3 Claims 4 and 10: the deposition of vaporisation glass of course always include vaporisation, and the step of depositing a second layer which includes a vaporisation glass is carried out in D1 by sputtering; see claim 32.
- 1.4 Claims 41-43: since the process for coating a substrate having at least one surface to be coated with a structured coating according to the steps in claim 1 is not novel, the resultant structured

substrate cannot be novel either. Moreover, the deposited glass layer in D1 forms part of a micro-electromechanical structure (see, for example, the abstract).

- 1.5 Claim 53: since the process for coating a substrate with a structured coating as per claim 1 is known, it is obvious that the device used to implement the process already exists.
2. The subject matter of claims 3 and 6-9 is not inventive and the requirement of PCT Article 33(3) is not met.
 - 2.1 Claim 3: the known process can of course be implemented with all types of substrates; see also documents D2 to D5.
 - 2.2 Claim 6: the vaporisation of inorganic materials is generally carried out by electron-beam vaporisation.
 - 2.3 Claim 7: it is common to use a single material source during the vaporisation step, for example by sputtering, in order to keep the process as simple as possible.
 - 2.4 Claim 8: on the contrary, it is common to use for each component its own source (e.g. for SiO₂ a Si source and an O₂ source) when vaporising by CVD.
 - 2.5 Claim 9: a person skilled in the art chooses the composition of a deposited layer as needed.

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